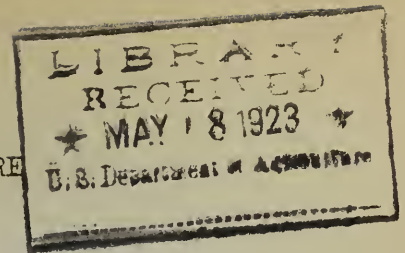


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THE CATTLE CRISIS IN ARGENTINA

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THE CATTLE CRISIS IN ARGENTINA.

By George B. L. Arner,

- Introduction -

During the past two years Argentina has been passing through a period of severe economic depression, which is the immediate consequence of the extremely low price of beef cattle. This report is a study of the cattle-raising and beef-packing industry in their connection with this economic crisis, and of the relation of the present situation in Argentina to international trade and to the markets for cattle and beef in the United States.

Argentina is a country of vast natural resources and a small population. It is consequently a country of primary industries and a great source of raw material and food products, which are modified only to the extent necessary for transportation through the tropics. Foreign trade is of greater importance relative to the population, than is the foreign trade of the United States, for there is little in the way of manufacturing in Argentina on account of the lack of coal, as well as on account of an insufficient labor supply. The country must live, therefore, by the exchange of the wealth of its pastoral and agricultural products for the manufactured products of Europe and North America.

- Economic Position of the Cattle Industry -

Among these basic exports, those derived from the cattle industry have always taken high rank, and frequently the place of first importance as shown by the following table of the values of specified exports and classes of exports from Argentina for the years 1913, 1918, 1919 and 1920.

Note:- A general report on the Live Stock Industry of Argentina is being prepared by D. S. Bullock, who has just returned from South America.

Table I.

VALUE OF SPECIFIED EXPORTS AND CLASSES OF EXPORTS FROM ARGENTINA.

(In United States Currency).

Commodity or Class.	1913.	1918.	1919.	1920.
Cattle, Beef and By-products	\$ 95,959,616:	\$340,683,062:	\$ 329,874,174:	\$161,673,497
Dairy Products	2,151,240:	19,231,255:	21,274,118:	20,659,535
Wool	43,582,667:	121,568,859:	143,193,529:	68,952,044
Other Pastoral Products:	17,926,742:	26,318,830:	46,717,870:	30,441,662
Wheat	98,805,772:	170,032,728:	198,872,717:	308,364,989
Corn	108,106,920:	16,734,393:	75,690,710:	149,379,949
Linseed	48,049,398:	37,047,192:	109,505,864:	104,310,308
Oats	19,685,147:	17,282,502:	10,214,471:	13,826,866
Other Agricultural Products	15,390,229:	21,678,353:	38,022,189:	46,215,954
Total Agricultural Products	449,658,231:	770,577,174:	973,365,642:	903,824,854
Forest Products	10,222,221:	15,641,238:	25,014,795:	17,292,691
Mineral Products	187,433:	1,580,538:	576,800:	455,191
Fishery and Game Products	1,749,189:	1,468,872:	1,785,579:	849,376
Miscellaneous	3,665,808:	23,202,801:	15,809,548:	18,444,978
Total Exports	465,482,832:	812,470,623:	1,016,552,364:	940,367,090

In 1913, Agricultural products constituted 93 per cent of the total exports by value; in 1918 95 per cent; in 1919, 96 per cent, and in 1920, 95 per cent. Taking all four years into consideration the value of the exports of cattle, beef and by-products was far greater than the value of any other export. In 1918 the exports of products of the cattle industry constituted 44.2 per cent of the total exports of the country.

In Table II the item of Cattle, Beef and by-products is further analyzed. The figures in this table are not absolutely complete as some beef by-products are included in miscellaneous meat products and other products produced both from cattle and from other animals. The percentage of error is, however, small and the table does show the relative importance, at least in these four years, of the various products of the cattle industry.

Table II.

EXPORTS OF CATTLE AND CATTLE PRODUCTS FROM ARGENTINA.
(In U. S. Currency.)

Articles.	1913.	1918.	1919.	1920
Live Cattle	\$ 6,593,554	\$ 7,465,747	\$ 4,018,042	\$ 3,856,679
Frozen beef	31,967,732	144,061,025	143,590,031	86,224,373
Chilled beef	3,290,112	375,998	842,119	11,952,106
Canned beef	1,210,524	94,128,688	69,186,838	4,892,763
Jerked beef	633,568	---	---	*
Tongues(Pickled & Frozen) :	127,034	980,726	1,166,045	504,817
Beef Extract and Bouillon :	1,803,696	3,040,141	1,566,488	280,065
Beef meal	1,056,656	319,189	53,179	94,726
Rendered tallow	9,573,975	29,101,628	28,711,513	12,410,109
Margarine, etc.	896,587	5,019,273	1,178,248	892,862
Stearine	101,791	451,483	750,657	627,818
Glycerine	131,156	421,636	19,549	99,192
Frozen offals	---	4,394,956	4,589,198	3,665,498
Dried blood	246,049	503,791	786,371	458,962
Salted Ox Hides	23,628,974	37,111,352	53,223,780	28,584,537
Dried Ox Hides	13,467,497	11,483,470	17,613,919	5,636,710
Tanned Ox Hides & Sole	---	---	---	---
Leather	59	1,291,938	2,031,434	218,421
Bones and Bone Ash	1,042,319	230,359	416,307	1,007,380
Hoofs and Horns	187,733	101,607	130,406	206,478
Total - Cattle, beef	---	---	---	---
and by-products	95,959,616	340,683,062	329,874,174	161,673,497
<u>DAIRY PRODUCTS.</u>	---	---	---	---
Butter	1,457,336	16,211,174	16,921,555	16,321,888
Cheese	1,413	2,329,482	2,708,888	2,989,416
Casein	663,512	680,987	1,575,120	1,264,846
Cream	28,979	9,612	68,555	83,435
Total - Dairy Products.	2,151,240	19,231,255	21,274,118	20,659,585
Grand Total	98,110,856	359,914,317	351,148,292	182,333,082

*Not separately listed

In addition, the home consumption of beef and by-products is of great importance, since the Argentine people with their pastoral traditions are large meat eaters. The Argentine statistician, Alejandro E. Bunge, in constructing an index number of food cost for Argentina gives to meat a weight of 30 per cent. He also estimates that of the meat consumed, 80 per cent is beef. ⁽¹⁾

(1) The Purchasing Power of Money in Argentina-1910-1918. Review of the River Plate Feb. 28, 1919.

A further indication of the extent of the domestic market is contained in the following table showing the number of animals killed in the different types of packing houses and slaughter-houses in Argentina in the year 1917.

Table III.

Killings of Meat Animals in 1917. (1)

Type of Abattoir	Cattle*	Sheep	Swine
Liniers Slaughter-Houses			
Buenos Aires	404,231	1,030,292	115,900
Packing Houses, including production of canned and salted meat.	2,496,284	2,233,896	193,383
Municipal and private slaughter houses. 2356 reporting.	1,127,624	521,999	77,041
TOTAL	4,028,139	3,786,187	386,324

*Includes about 180,000 calves.

These figures do not represent the total slaughter, as many small slaughter houses did not report, and some cattle were slaughtered on ranches. It is reported that the total number of cattle killed or dying in Argentina in 1918 was close to 6,000,000, with an annual average of 5,000,000. (2) In 1917 the number of ox and calf hides exported, or utilized in the country, was 5,873,000, and the average exportation of hides for the ten years 1910-1919 was 102,000 short tons, which would probably represent about 5,000,000 hides. The number of beef quarters exported in 1917 was 5,046,638, representing 1,261,660 animals. In addition there were exported 111,094 tons of canned beef and 8,392 tons of jerked beef, which would require for production possibly 500,000 cattle. Thus even if we include only the reported slaughter 4,000,000 cattle it is evident that at least 50 per cent were used for domestic consumption. Further, the per capita consumption of beef in Buenos

1. Commerce Reports, Nov. 15, 1918

2. Consular Report, Buenos Aires, Apr. 26, 1922.

Aires in 1917, is stated as 76 kilos, or 168 pounds. (1) Allowing a population of 2,000,000 for the capital and its suburbs, this means the consumption of 336,000,000 lbs., or allowing 600 lbs. per head, about 560,000 cattle. Since the total population of Argentina is over 8,000,000 and since there is probably at least as great per capita consumption in the country as in the city, there must be a domestic consumption of at least 2,000,000 beef cattle annually.

It is not at all surprising, therefore, that a drop in the price of cattle to figures even below the average for the five years before the war, accompanied as it was by lower prices for other articles of export, spread consternation among the Argentine ranchers. Since the packing companies are the largest purchasers of cattle, it has been freely charged that they are in combination to depress the market price. The packers have replied that the whole world has been passing through a period of deflation and that the reaction in Argentine cattle prices is only a part of the readjustment to the prewar basis. The producers, however, refuse to be convinced, and have carried the issue into politics in the effort to force legislation for government control of the packing industry and for the proposed measures of control of prices.

Many measures have been proposed in Congress but at the present writing no action has yet been taken. One proposal which has been widely supported is to fix a minimum price for different grades of cattle, and to exact heavy penalties from any packing company paying less than the minimum price.

(1) Commerce Reports, Nov. 15, 1918. A press release of the U. S. Dept. of Agriculture, Feb. 23, 1923, estimates the per capita consumption of meat in the United States for 1922 as 149.7 lbs. This is made up of 61.4 lbs. of beef, 7.3 lbs. of veal, 5 lbs. of mutton and lamb and 76 lbs. of pork. The corresponding Argentine figures would be roughly, 168 lbs. of beef and veal, 20 pounds of mutton and lamb and 10 lbs. of pork, a total meat consumption of 198 lbs. per capita. See also article by Bunge in Review of the River Plate, Feb. 28, 1919.

In the bill as introduced, the minimum fixed is but little lower than the war time prices and nearly double the present market prices. Another measure would limit packers' profits to fifteen per cent of the capital actually employed in the business. The supporters of this plan urge that if the packers are thus limited they will employ more capital and pay higher prices in order to increase their total profits. Other proposals provide for a reduction in agricultural land rentals and for a moratorium on agricultural loans. The only recent agrarian legislation of any sort in Argentina is the law passed in 1921 for the regulation of farm tenancy.¹

On January 19, 1923, however, President Alvear addressed three messages to Congress calling for comprehensive legislation, first: for greater control of the packing companies and of commerce in live stock and meat products; second, for a law to prevent combinations in restraint of trade; and third, for the financing and construction of a state owned packing house in Buenos Aires. These measures are accompanied by the texts of the proposed laws, which it is understood were prepared by the Minister of Agriculture, Dr. Tomas A. LeBreton, who was until recently Argentine Ambassador to the United States.²

¹ For summary of law see International Yearbook of Agricultural Legislation, 1921, Page LVII.

² These messages are published in translation in the Review of the River Plate for Jan. 26, 1923.

The Development of New Foreign Markets

While the Argentine government has not, until very recently at least, been inclined to favor legislation for the benefit of the cattle producers, it has been very active in its efforts to develop new foreign markets for Argentine beef. In the summer of 1922, Dr. Daneri, a special commissioner of the Argentine Government, negotiated an agreement with a German syndicate for the exchange of frozen beef and cattle on the hoof for German manufactured products. In Argentina, however, opposition developed to the plan of having the government enter the business of marketing beef, and it became necessary to organize a new corporation (The Argentine Frozen Meat Exporting Company) to carry out the terms of the contract. The first shipment of 550 tons was made early in November, 1922, by the German steamer "Niedenwald." The Sansinena Meat Company, the only one of the packing companies controlled by Argentine capital, is understood to hold 20 per cent of the capital of the exporting company and also acts as intermediary in the purchase of steers, slaughter, refrigeration and loading. (1)

Efforts are also being made to develop a market for Argentine beef in the United States. In 1914 and 1915 a considerable quantity of beef was marketed in the United States but these shipments were interrupted by war developments, and following the war a tariff of two cents a pound, together with increased freight rates, discouraged further shipments. Under the new tariff act the tariff has been increased to three cents and the freight and insurance will amount to another three cents. Yet even under these discouraging conditions a partial cargo of 160 tons of frozen beef was shipped from Buenos Aires to New York on November 18, 1922. (2)

(1) Review of the River Plate, November 10, 1922, p. 1135.

(2) Washington Post, November 25, 1922, also Times of Argentina, Nov. 27, 1922.

Dr. LeBreton in an address delivered on November 9, 1922, was very optimistic over the prospects of beef exports to the United States. He showed that the wholesale price of the best quality beef in New York was fifteen cents while chilled beef in Buenos Aires was selling for 6.75 cents a pound. He estimated the tariff, freight and insurance at five cents, leaving a safe margin of profit on the sale.⁽¹⁾ It is probable, however, that Dr. Le Breton underestimated the cost of placing the Argentine beef in New York, and also that he overestimated the price which could be obtained for the beef in New York, as it is likely that foreign chilled or frozen beef would sell for much less than the Chicago dressed beef, on account of the longer period of storage if not on account of quality. The real answer seems to be that, since packers in the United States control over fifty per cent of the River Plate beef trade and know the situation, they would undoubtedly import Argentine beef into the United States on their own initiative if it were profitable to do so.

In September 1922, contracts were signed for the exportation of 1,000 head of live cattle from Argentina to Greece, with provision for a further shipment of 9,000 head if the first shipment proved satisfactory.⁽²⁾ In each year since the close of the war there have been shipments of Argentine beef to ports in Belgium and the Netherlands, and a few small shipments to Italy, but of all the new markets, that in France seems the most promising. In the early days of the frozen beef trade shipments to France were sold readily, but later the French people became violently prejudiced against imported beef, so much so that even in the World War the French

(1) Review of the River Plate, November 17, 1922, p. 1201.

(2) Report of Ambassador Riddle, Oct. 11, 1922.

armies had to be provided with fresh meat while the British and American armies were more economically supplied with the frozen or canned beef from the United States or Argentina. The frozen meat interests charge that this French prejudice was originally inspired by propaganda from the domestic trade. It is also charged that during the war this prejudice was intensified by the resale in France of military supplies in bad condition. Until very recently, therefore, good Argentine beef would bring no more than horse flesh in the Paris markets. (1)

With the departure of the Allied Armies from France, imports of Argentine beef declined to about 10,000 tons, but during the past year several consignments of frozen beef have been successfully placed in the French markets. In 1922 the "Banco de la Nacion Argentina" was obliged to take 1830 steers in satisfaction of a loan, and rather than to sell at current prices, entered into an agreement with the Sansinena Company to market them as beef in France. The steers averaged 668 pounds of dressed meat, and at current prices would have brought \$53,747 in Argentina.

The transaction covered 120 days and after deducting all expenses yielded to the bank a net profit over Argentine prices of \$10,641, notwithstanding the fact that the price of beef in France at the time was considerably lower than it was only a few weeks later. (2)

The British Ministry of Agriculture and Fisheries recently published the following item:

"The Ministry learns through the Department of Overseas Trade that an agreement has been concluded between France and

(1) Sr. C. A. Tornquist, quoted in Review of the River Plate, Nov. 17, 1922, p. 1203.

(2) See Review of the River Plate, Dec. 1, 1922, p. 1325.

the Argentine with regard to the importation of frozen meat. It is expected that by this agreement France will be able to import considerable quantities of frozen meat at a price round about Frs. 2-1/2 per kilo. delivered at the port, and that it will be possible to sell such meat in France at a price which should not exceed anywhere more than Frs. 5 per kilo. The meat will be imported direct in French vessels and will, it is anticipated, be of better quality than that which previously reached France through the United Kingdom because it would not be kept so long in storage. In exchange for meat purchases, Argentina undertakes to give orders to France for metal goods to an amount at least equal to half the sum paid by France for the meat. In addition, the prohibition of the import into Argentina of French live stock for breeding has been removed." (1)

On January 17, 1923, the Associated Press released a dispatch from Paris reading as follows:

"Shipments of Argentine frozen meat, which will begin this month from Rosario, Argentina, under the terms of the recent Franco-Argentine commercial agreement, will be used by some of the cooperative societies to cut down the high cost of living. It is expected that this frozen beef will sell in the interior at roughly one-third the present price of fresh beef."

In spite of all these efforts to obtain other markets it is likely that for many years to come the United Kingdom will remain the chief market for Argentine beef. Great Britain has a greater deficit in its domestic beef supply than any other country, and at the same time it still possesses the convenient ability to pay for the foreign beef which it desires to import. From 1907 to 1914, ninety per cent of the Argentine beef exports went to the United Kingdom, and only in the four years 1917-1920, inclusive, have the exports to Great Britain fallen below eighty per cent of the total. (2) Even in 1913, when forty-four per cent of the Argentine beef exports went to countries other than Great Britain, much of this beef actually went to provision the British armies in France.

(1) British Ministry of Agriculture and Fisheries, Agricultural Market Report, February 16, 1923, p. 2.

(2) See Tables XXIV and XV in Appendix

The following table, taken from the summary of Argentine export trade published each year by the "Review of the River Plate," shows the trend of the exports of chilled and frozen beef in the years since the great war. Unfortunately no official figures or even tonnage figures are available since 1920.

TABLE IV

Exports of Frozen and Chilled Beef From Argentina
(Quarters)
1918 - 1922

Country	1918	1919	1920	1921	1922
United Kingdom...	2,717,890	2,566,973	3,505,701	3,968,923	4,513,589
United States ...	----	----	114,731	31,382	14,719
France	2,248,120	1,884,244	602,735	82,264	152,108
Germany	----	----	89,958	-----	66,660
Belgium	(*)----	(*)----	325,772	231,670	204,490
Italy	783,678	277,814	13,971	4,390	37,150
Netherlands	----	8,126	3,700	22,075	39,827
Denmark	----	----	----	2,638	----
Sweden and Norway	----	20,887	1,784	-----	----
Brazil	----	----	4,996	-----	----
Orders	439,320	280,317	507,447	403,620	66,420
Other countries	29,219	69,843	8,097	2,576	583
Total	6,218,227	5,103,204	5,178,892	4,749,538	5,095,546

(*) Not separately listed.

CATTLE PRICES - BUENOS AIRES AND CHICAGO.

The Liniers Market in Buenos Aires is the center of the cattle trade in Argentina. To this market cattle of all grades are shipped from the provinces and sold at auction by the head. The buyers of the packing houses and the butchers of the city bid for the fat steers and for the cheaper cows and bulls, while the thin steers from the ranges are bought by the feeders and taken out to the great alfalfa meadows of Buenos Aires province for fattening. There is, of course, a great deal of direct purchase from the estancias or ranches, particularly by the packing houses, but the Liniers Market prices are generally accepted as representative.

Since in Argentina it is not the custom to weigh cattle before sale, it is quite difficult to make satisfactory price comparisons between prices in Buenos Aires and those in Chicago. The commercial published quotations usually give only the price range for the different grades of cattle, with no indication as to the true average price. Then the grades frequently change over a period of years, making it almost impossible to follow even the price range of any particular grade. The commonly accepted quotations are the monthly average prices from the "Boletin Mensual de Estadistica Agricola," the official publication of the Direccion de Economia Rural y Estadistica. But here also the grades are occasionally changed and there is no information as to how these averages are derived. Then from October, 1919, to March, 1921, no figures were published. The missing figures have been obtained from the office of the Direccion de Economia Rural y Estadistica by D. S. Bullock, U. S. Agricultural Commissioner,¹ but these supplied average prices do not fluctuate in conformity with known market con-

¹ Report #69, Sept. 23, 1922.

ditions and one monthly average is admitted to be erroneous because of improper classification of one large lot of steers.

In this study, therefore, the official figures have been used only as a check on the more satisfactory commercial quotations taken from the "Review of the River Plate." In this periodical since 1916, in addition to the price range per head, a derived price has been quoted per pound of anticipated dressed weight for chilled beef steers. From several sources it has been possible to obtain estimates of the average dressed weight of this grade of steers. From a consideration of these estimates it has been assumed that the average is 730 pounds. (1) We also have an estimate that chilled beef cattle will dress on the average 58 per cent of the weight on the hoof. (2) We have thus been able to estimate the average live weight of chilled beef steers at 1,259 pounds. These are the finest steers sold on the Liniers Market, of medium weight and fatness and from two to three years old. Many of them are pure bred Shorthorns or Aberdeen Angus cattle. The prices of steers shown in Table V, from 1916 through 1922, were, therefore, obtained by taking a monthly average of the weekly price per pound quotations and multiplying by 730. In Table VII, the price per hundred pounds live weight was obtained by dividing items in the converted table of cattle prices (Table VI) by 12.59. (3)

Back of 1916 the only commercial price figures are those of the

(1) See Mexia, Ezequiel Ramos, "Los Mercados de Ganados, Carnes y Cueros." Also Prebisch, Raul, "Information Estadística sobre el Comercio de Carnes"; Bullock, D.S., Market Report #38, May 4, 1922.

(2) Mexia, op.cit.

(3) From 1909 through 1911 prices were converted at the rate of .424512 pesos to one dollar (par of exchange). From January 1912 through June 1921 the exchange rates used were monthly averages derived from the weekly quotations published in the International Yearbook of Agricultural Statistics, Page 505. Since July 1921 the rates used are the monthly averages quoted in the Bulletin of the United States Federal Reserve Board.

weekly range for different grades as noted above. Since the designations of these grades changed two or three times from 1909 through 1915 it was thought best to take the average of the best grade quoted as the basis for the price table. By checking a similarly derived average after 1916 with the price obtained from the pound quotation, it was found that the average of the range of prices was usually somewhat higher than the derived price. Also in the market reports, particularly in 1914 and 1915, it is occasionally stated parenthetically that these best grade steers will dress about 300 pounds. It is evident, therefore, that some cattle heavier than the present chilled beef grade are included. Therefore, in order to make the price series before 1916 comparable with the prices subsequent to that year, the average range for the month was divided by 300 and multiplied by 730. This derived average price was found to check fairly well with the official average for the best grade steers taken from the "Boletín Mensual de Estadística Agrícola," although the series of derived figures much more than the official figures are responsive to the market conditions as reported in the weekly summaries. (1)

(1) Table V also checks within a reasonable margin of error with two tables of prices published in an article entitled "The Home Meat Market" in The Review of the River Plate for Jan. 5, 1923, page 47. The first of these tables gives the price per head in the Liniers Market, monthly from 1912 through 1922, but with no information as to grade. The second table gives the price per pound paid by the packing companies to one cattle owner for chilled beef steers at private purchase during the same period. These prices during 1921 and 1922 are consistently higher than the prices paid for the same grade on the Liniers Market, thus supporting the contention of the writer of the article that the packing companies force down the price in the Market in order that their agents may make direct purchases at their own prices. It may also be noted that in the quarterly review "Business Conditions in Argentina" for January 1, 1923, it is stated that "good steers, suitable for chilled beef, fetch from 17 to 18 cents per pound of meat." This would be from 124. to 131.50 pesos per head, equivalent to from \$46.90 to \$48.65 per head or from \$3.72 to \$3.86 per hundred pounds live weight. These prices as will be noted are considerably higher than the Liniers Market quotations, and probably represent private purchases.

In this rather complicated process there are, of course, many possibilities of error in the individual monthly average prices, but as to the general trend of prices the series can not be far from accurate.

The figures in Table VIII are index numbers of cattle prices in Argentine currency derived from Table V with a simple average of prices from 1909-1913 as a base. No attempt was made to correct for seasonal trend because in the base years the seasonal trend is twice obscured by other tendencies which make statistical correction rather unsatisfactory. The index in Table IX is based similarly on the price Table (Table VI) as converted into U. S. currency. This is in effect a correction of the first index for the fluctuations in the exchange value of the Argentine peso.

In Table X an attempt has been made to obtain a price series for a grade of beef steers in Chicago which will correspond to the chilled beef steers in Buenos Aires. Since the grade designations in Chicago change almost as frequently as those in Buenos Aires, it was considered that a closer approach to a uniform grade could be reached by taking the prices for steers of a similar weight through the same series of years. These prices were available in the "Year Book of Figures," published by the Drover's Journal for steers weighing from 1,200 to 1,350 pounds. The prices for these weights for 1919 which were not published in the Yearbook were furnished by the office of the Drover's Journal. In Table XI these figures are reduced to an index based upon the 1909-1913 average price. Table XII shows the differences month by month between the prices of cattle per 100 pounds in Buenos Aires and the corresponding prices in Chicago.

Table V.

CHILLED BEEF STEERS, LINIERS MARKET - BUENOS AIRES.

Price per head 730 lbs. dressed. Quotations from Review of the River Plate.

(In Argentine paper pesos.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	89	90	91	89	91	95	101	108	117	130	125	113	103
1910	99	98	107	107	105	108	110	118	127	137	128	103	112
1911	106	107	114	113	114	117	123	124	125	124	119	103	116
1912	106	112	107	110	110	110	110	120	123	123	123	121	115
1913	125	123	131	146	156	149	152	153	153	156	160	155	147
1914	148	156	162	169	163	169	170	174	175	184	170	167	167
1915	166	163	163	167	163	166	178	204	225	225	212	195	186
1916	204.50	210	201.50	202.50	202.50	188.25	194.25	199	204.50	210	202.50	193.50	201
1917	190.75	188	188.25	186.25	188	181.75	184.25	187	180.75	188	166.50	149.75	181.60
1918	151.50	167.15	167.90	171.55	168.25	167.90	176.10	212.45	237.25	239.10	225.55	225.40	192.51
1919	223.55	218.10	219.90	224.50	229.20	209.90	254.60	266.45	286.50	273.75	241.80	225.40	239.47
1920	232.70	232.70	238.45	236.35	233.60	226.30	232.15	248.20	244.55	255.50	235	219	236.21
1921	214.45	213.50	210.80	209.90	175.20	167.90	160.60	177	194.90	194.35	190.70	167.90	189.77
1922	173.40	156.95	137.24	116.80	115	136.50	154.20	156.95	149.65	135.05	115	108.75	137.96

From 1909 to 1913 inclusive, average quotation per head ÷ 800 x 730.
 1914-15 inclusive, same corrected by occasional cents per lb. quotations.
 1916-22 inclusive, Cents per lb. quotation x 730.

Table VI.

CHILLED BEEF STEERS, LINIERS MARKET, BUENOS AIRES.

Price per head 730 lbs. dressed.

(In U.S. Currency)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	37.78	38.21	38.63	37.78	38.63	40.33	42.88	45.85	49.67	55.19	53.06	47.97	43.83
1910	42.03	41.60	45.42	45.42	44.57	45.85	46.70	50.09	53.91	58.16	54.34	43.72	47.65
1911	45.00	45.42	48.39	47.97	48.39	49.67	52.21	52.64	53.06	52.64	50.52	43.72	49.14
1912	45.01	47.60	45.58	46.92	46.78	46.76	46.76	51.01	52.29	52.29	52.25	51.42	48.72
1913	53.14	52.74	55.96	62.10	66.25	53.17	64.24	64.43	64.43	65.69	67.38	65.27	62.07
1914	62.39	66.33	68.91	71.60	68.83	71.37	72.18	75.63	78.20	79.20	73.83	73.01	71.79
1915	71.96	70.63	69.97	71.12	68.47	69.75	75.18	84.43	93.85	94.68	89.49	82.99	78.54
1916	87.22	90.00	86.96	87.19	86.11	79.41	80.79	82.39	86.15	90.09	87.56	84.80	85.72
1917	84.25	82.64	81.70	79.42	81.33	79.82	80.19	80.60	77.54	82.28	75.92	69.90	79.63
1918	67.90	73.37	73.98	76.29	76.04	75.25	78.17	94.36	105.89	106.91	101.11	101.47	85.90
1919	100.16	97.60	97.48	98.88	101.08	90.72	108.33	112.28	121.23	115.86	103.84	97.17	103.72
1920	100.24	100.31	103.30	101.53	99.24	95.18	94.01	93.46	90.01	91.49	79.08	75.27	93.59
1921	74.61	74.89	71.93	68.17	55.34	51.68	46.50	51.83	59.71	62.49	61.65	55.26	61.17
1922	58.89	57.03	49.99	41.50	41.70	49.16	55.53	56.69	53.39	48.38	41.60	40.94	49.57

Table VII.

PRICES OF CHILLED BEEF STEERS PER 100 LBS. LIVE WEIGHT, BUENOS AIRES.

(In U.S. Currency.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	3.00	3.03	3.07	3.00	3.07	3.20	3.41	3.64	3.95	4.38	4.21	3.81	3.48
1910	3.34	3.30	3.61	3.61	3.54	3.64	3.71	3.98	4.28	4.62	4.32	3.47	3.78
1911	3.57	3.61	3.84	3.81	3.84	3.95	4.15	4.18	4.21	4.18	4.01	3.47	3.90
1912	3.58	3.78	3.62	3.73	3.72	3.71	3.71	4.05	4.15	4.15	4.15	4.08	3.87
1913	4.22	4.19	4.44	4.93	5.26	5.02	5.10	5.12	5.12	5.22	5.35	5.18	4.93
1914	4.96	5.27	5.47	5.69	5.47	5.67	5.73	6.01	6.21	6.29	5.86	5.80	5.70
1915	5.72	5.61	5.56	5.65	5.44	5.54	5.97	6.71	7.45	7.52	7.11	6.59	6.24
1916	6.93	7.15	6.91	6.93	6.84	6.31	6.42	6.54	6.84	7.16	6.95	6.74	6.81
1917	6.69	6.56	6.49	6.31	6.46	6.34	6.37	6.40	6.16	6.54	6.03	5.55	5.32
1918	5.39	5.83	5.88	6.06	6.04	5.98	6.21	7.49	8.41	8.49	8.03	8.06	8.82
1919	7.96	7.75	7.74	7.85	8.03	7.21	8.60	8.92	9.63	9.20	8.25	7.72	8.24
1920	7.96	7.97	8.20	8.06	7.88	7.56	7.47	7.42	7.15	7.27	6.28	5.98	7.43
1921	5.93	5.95	5.71	5.41	4.40	4.10	3.69	4.12	4.74	4.96	4.90	4.39	4.86
1922	4.68	4.53	3.97	3.30	3.31	3.90	4.41	4.50	4.24	3.84	3.30	3.25	3.94

Table VIII.

INDEX OF PRICES OF CHILLED BEEF STEERS, LINIERS MARKET, BUENOS AIRES.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	75	76	77	75	77	80	85	91	99	110	105	95	87
1910	84	83	90	90	89	91	93	100	107	116	108	87	95
1911	89	90	96	95	96	99	104	105	105	105	100	87	98
1912	89	95	90	93	93	93	93	101	104	104	104	102	97
1913	105	104	111	123	132	126	128	129	129	132	135	131	124
1914	125	132	137	143	138	143	143	147	148	155	143	141	141
1915	140	138	138	141	138	140	150	172	190	190	179	165	157
1916	173	177	170	171	171	159	164	168	173	177	171	163	170
1917	161	159	159	157	159	153	155	158	153	159	141	126	153
1918	128	141	142	145	142	142	149	179	200	202	190	190	162
1919	189	184	186	189	193	177	215	225	242	231	204	190	202
1920	196	196	201	199	197	191	196	209	206	216	198	185	199
1921	181	180	178	177	148	142	136	149	164	164	161	142	160
1922	146	132	116	99	97	115	130	132	126	114	97	92	116

Table IX.

INDEX OF PRICES OF CHILLED BEEF STEERS IN BUENOS AIRES.

(Converted to U.S. Currency)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	75	76	77	75	77	80	85	91	99	110	105	95	87
1910	84	83	90	90	89	91	93	100	107	116	108	87	95
1911	89	90	96	95	96	99	104	105	105	105	100	87	98
1912	90	95	91	93	93	93	93	101	104	104	104	102	97
1913	106	105	111	123	132	126	128	128	128	131	134	130	124
1914	124	132	137	143	137	142	144	151	156	158	147	145	143
1915	143	141	139	142	136	139	150	168	187	188	178	165	156
1916	174	179	173	174	171	158	161	164	171	179	174	169	171
1917	168	164	163	158	162	159	160	160	154	164	151	139	158
1918	135	146	147	152	151	150	156	188	211	213	201	202	171
1919	199	194	194	197	201	181	215	223	241	230	207	193	206
1920	199	200	205	202	197	189	187	186	179	182	157	150	186
1921	149	149	143	136	110	103	92	103	119	124	123	110	122
1922	117	113	99	83	83	98	110	113	106	96	83	81	98

Prices of Chilled Beef Steers, Live Weight Buenos Aires and Average Prices of Native Steers at Chicago, Weights from 1200 to 1350 lbs.

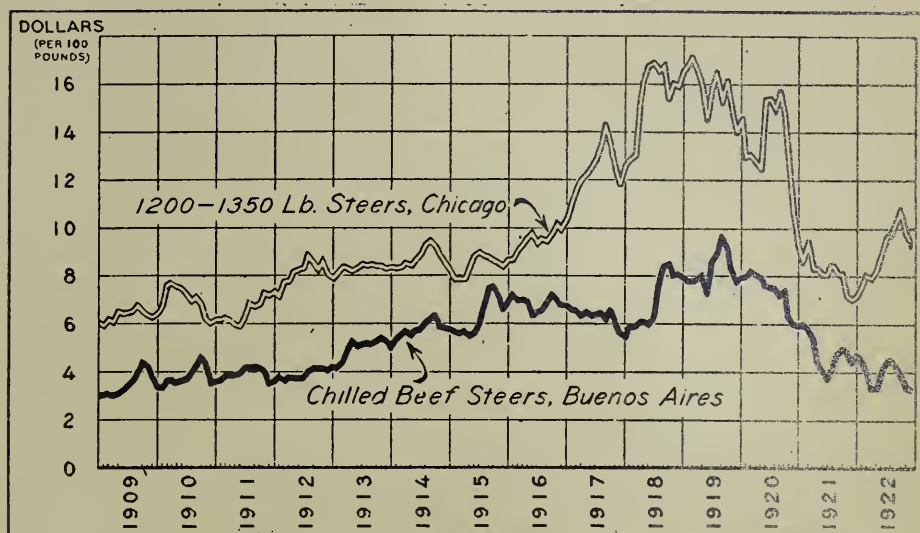


Chart 1. See Tables VII and X.

Index Numbers of Prices of Chilled Beef Steers Buenos Aires and of Native Steers, Weights 1200 to 1350 lbs Chicago.

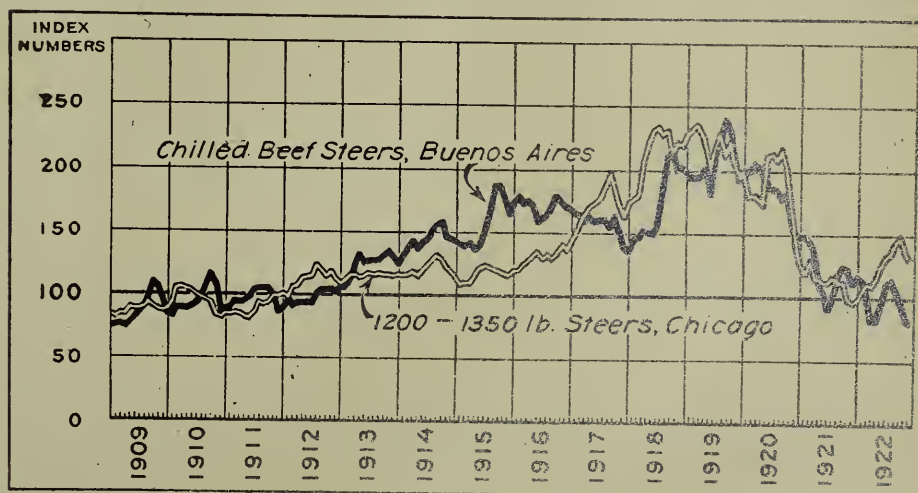


Chart 2. See Tables IX and X.

By reference to the index tables (Nos. VIII and IX) it will be noted that cattle prices in Argentina remained fairly constant from the middle of 1909 up to March, 1913, when the trend became definitely upward. There seemed to be no further strengthening of the market immediately after the outbreak of the war, but in the latter part of 1915 prices increased sharply and remained high through 1916. With the intensification of the German submarine campaign there came a decided drop in Argentine cattle prices and prices were relatively low throughout 1917 and until August, 1918, when they rose rapidly and remained at a very high point until November, 1921.

In November and December, 1917, and throughout 1918, Argentine exchange in New York was above par, while in the latter part of 1920 there was a sharp fall in the value of the peso coincident with the beginning of the period of price deflation in Europe and the United States. It is necessary, therefore, to turn to Table IX to get the full force of the rapid drop in cattle prices which spread consternation among the estancieros and precipitated an economic crisis in the whole country. For eight years prices had been from fifty to one hundred and forty per cent above the old level. During this time the whole country had become accustomed to a new price level, but the cattle price index had usually been still higher than the index number of the cost of living,¹ so Argentina had enjoyed unexampled prosperity. Table XIII gives a comparison between index number of the cost of living (rent, clothing and food) and the index number of cattle prices shifted to a 1910 base. This cost of living index was computed by Alejandro E. Bunge, Director General of Statistics of Argentina, through 1917¹

¹ The Purchasing Power of Money in Argentina, 1910-1918. Review of the River Plate, Feb. 28, 1919.

Table X.

AVERAGE PRICES OF NATIVE STEERS AT CHICAGO, 1909-1922.

Per 100 lbs. live weight.

(Weights 1200 to 1350 pounds.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	\$ 6.05	\$ 5.90	\$ 6.15	\$ 6.05	\$ 6.50	\$ 6.40	\$ 6.45	\$ 6.50	\$ 6.75	\$ 6.50	\$ 6.35	\$ 6.25	6.32
1910	6.40	6.75	7.55	7.65	7.50	7.40	7.20	6.90	7.10	6.80	6.15	6.00	6.95
1911	6.15	6.15	6.20	6.10	5.95	5.85	6.25	6.85	6.70	6.80	7.25	7.15	6.45
1912	7.30	7.10	7.70	7.70	8.15	8.25	8.30	8.85	8.50	8.25	8.60	8.05	8.06
1913	7.85	8.10	8.35	8.30	8.20	8.30	8.45	8.40	8.45	8.40	8.40	8.30	8.29
1914	8.35	8.30	8.35	8.50	8.40	8.55	8.90	9.25	9.45	9.20	8.80	8.50	8.72
1915	8.25	7.80	7.85	7.85	8.35	8.80	8.95	8.80	8.75	8.60	8.50	8.40	8.41
1916	8.60	8.65	9.00	9.25	9.50	9.75	9.30	9.50	9.40	9.70	10.20	9.90	9.40
1917	10.40	11.05	11.65	12.00	12.25	12.50	12.80	13.40	14.25	13.25	12.40	11.85	12.32
1918	12.60	12.80	13.00	15.00	16.15	16.75	16.85	16.50	16.75	15.35	16.00	15.85	15.30
1919	16.55	16.80	17.10	16.50	15.75	14.45	15.80	16.50	15.25	16.10	15.00	14.00	15.82
1920	14.50	12.95	13.00	12.75	12.50	15.30	15.35	14.90	15.65	14.60	12.30	10.55	13.70
1921	9.15	8.55	9.40	8.30	8.30	8.05	8.05	8.45	8.10	8.10	7.15	7.00	8.22
1922	7.15	7.55	8.05	7.95	8.30	9.00	9.60	9.75	10.30	10.75	9.85	9.30	8.96

Source: Chicago Daily Drovers Journal.

Table XI.

INDEX NUMBER OF PRICES OF NATIVE STEERS IN CHICAGO, 1909-1922.

(Weights 1200-1350 lbs.) Base Average Price 1909-13 \$7.214 = 100.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	84	82	85	84	90	89	89	90	94	90	88	87	88
1910	89	94	105	106	104	103	100	98	96	94	85	83	96
1911	85	85	86	85	82	81	87	95	93	94	100	99	89
1912	101	98	107	107	113	114	115	123	118	114	119	112	112
1913	109	112	116	115	114	115	117	116	117	116	116	115	115
1914	116	115	116	118	116	120	123	128	131	128	122	118	121
1915	114	108	109	109	116	122	124	122	121	119	118	116	116
1916	119	120	125	128	132	135	129	132	130	134	141	137	130
1917	144	153	161	166	170	173	177	186	198	184	172	164	171
1918	175	177	180	208	224	232	234	229	232	213	222	220	212
1919	229	233	237	229	218	200	219	229	211	223	208	194	219
1920	201	180	180	177	173	212	213	207	217	202	171	146	190
1921	127	119	130	115	115	112	112	117	112	112	99	97	114
1922	99	105	112	110	115	125	133	135	143	149	137	129	124

Table XII.

Differences Between Prices of Chilled Beef Steers per 100 lbs. in Buenos Aires and of Native Steers of 1200 to 1350 lbs. Weight in Chicago.
(Chicago prices in excess of Buenos Aires prices.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	3.05	2.87	3.08	3.05	3.43	3.20	3.04	2.86	2.80	2.12	2.14	2.44	2.84
1910	3.06	3.45	3.94	4.04	3.96	3.76	3.49	2.92	2.82	2.18	1.83	2.53	3.16
1911	2.58	2.54	2.36	2.29	2.11	1.90	2.10	2.67	2.49	2.62	3.24	3.68	2.55
1912	3.72	3.32	4.08	3.97	4.43	4.54	4.59	4.80	4.35	4.10	4.45	3.97	4.19
1913	3.63	3.91	3.91	3.37	2.94	3.28	3.35	3.28	3.33	3.18	3.05	3.12	3.36
1914	3.39	3.03	2.88	2.81	2.93	2.98	3.17	3.24	3.24	2.91	2.94	2.70	3.02
1915	2.53	2.19	2.29	2.20	2.91	3.26	2.98	2.09	1.30	1.08	1.39	1.81	2.17
1916	1.67	1.50	2.09	2.32	2.66	3.44	2.88	2.96	2.56	2.54	3.25	3.16	2.59
1917	3.71	4.49	5.16	5.69	5.79	6.16	6.43	7.00	8.09	6.71	6.37	6.30	5.99
1918	7.21	6.97	7.12	8.94	10.11	10.77	10.64	9.01	8.34	6.86	7.97	7.79	8.48
1919	8.59	9.05	9.36	8.65	7.72	7.24	7.20	7.58	5.62	6.90	6.75	6.28	7.58
1920	6.54	4.98	4.80	4.69	4.62	7.74	7.88	7.48	8.50	7.33	6.02	4.57	6.26
1921	3.22	2.60	3.69	2.89	3.90	3.95	4.36	4.33	3.36	3.14	2.25	2.61	3.36
1922	2.47	3.02	4.08	4.65	4.99	5.10	5.19	5.25	6.06	6.91	6.55	6.05	5.03

and has been continued through 1921 in a report of the Argentine Department of Labor.¹

Table XIII.

Index Number of Cattle Prices in Argentina Compared with
Index Number of Cost of Living.

Year.	Cattle Prices from Table V : Shifted to 1910 Base.	Cost of Living, Rent, Food, Clothing - Base 1910.
1910	100	100
1911	104	101
1912	103	105
1913	131	108
1914	149	108
1915	166	117
1916	179	125
1917	162	146
1918	172	174
1919	214	186
1920	211	202
1921	169	188
1922	123	---

There is no information as to the general price level in 1922, but it is hardly probable that it has fallen so near the pre-war level as have the cattle prices on which so large a proportion of the population depends. We have no definite information as to wages of agricultural labor, but since the wages of industrial laborers doubled from 1917 to 1921,² we may assume that there has been some increase in the labor cost on the estancias. Agricultural land rentals in Argentine currency have practically doubled. Land which rented for the equivalent of from \$0.92 to \$1.63 per acre in 1913, now rents at from \$1.50 to \$3.06 per acre at par of exchange.³

¹ Cronica Mensual del Departamento del Trabajo, April, 1922.

² Bunge, op.cit.

³ Report of Consul General W. Henry Robertson, Oct. 12, 1922.

By reference to Table X it will be seen that the course of cattle prices in Chicago during the war period was quite different from that in Buenos Aires. At least from the point of view of the export trade the cattle industry of the United States has been declining in relative importance since the early years of the century. In 1912 Chicago cattle prices increased decidedly, while Argentine prices remained unchanged. Since there was little export trade, the outbreak of the war did not seriously disturb the Chicago market but in 1916 when the high prices in Europe again began to attract North American beef there was a very decided strengthening of prices and with the entrance of the United States into the war, prices rose rapidly just at the time Argentine prices were somewhat depressed. The period of high prices in the United States thus lasted only four years, 1917-1920 inclusive, instead of eight years (1913-1920) as in Argentina. When the period of deflation came late in 1920 the drop in prices was even more rapid in Chicago than in Buenos Aires but the low point was reached in December 1921, with a decided recovery in 1922.

The bearing of these price fluctuations on the possibility of exports of beef from Argentina to the United States is shown in the table of differences (Table XII). In this table it will be noted first that in every month of the fourteen years prices have been absolutely higher in Chicago than in Buenos Aires.¹

¹ While the price of dressed meat may vary independently of the price of cattle, the price of cattle is unquestionably the greatest single element in the cost of beef production, and as there are no quotations in Argentina for the type of dressed beef which is exported, the best basis for comparison seems to be the cattle price.

From 1909 to 1913 the difference in price ranged from \$1.90 per hundred to \$4.80. There were no exports to the United States, as the difference was not great enough to overcome the tariff of 1-1/2 cents a pound and the freight rate, which though not quoted would probably have been about one to one and a half cents a pound.¹ When the tariff was removed in 1913, exportation to the United States began immediately. In 1914, 65,000 tons of frozen Argentine beef were marketed in the United States and 44,000 tons in 1915.² By 1916, however, not only had the demands of the European war made Europe a better market than the United States, but the difference in cost in the early part of the year was little more than the freight rate. The United States market was then neglected by the Argentine trade until the close of the war in spite of the increased price differential. At the close of the war there were a few beef shipments from Argentina to New York, but these were soon stopped by the emergency tariff of two cents a pound. In 1922 the tariff was increased to three cents a pound but in October and November, the differential was so great that as we have seen some beef was again exported to the United States.³ The fact that there seem to have been no further exports in December with a differential of \$6.05 as compared with \$6.55 in November, may give some indication of the price differential necessary in order to overcome the handicap of the tariff and

¹ Critchell and Raymond in "A History of the Frozen Meat Trade," 1913, Page 144, give the rate on chilled beef to British ports as 11/16 d. per pound.

² See Table XXV Appendix.

³ See page 7.

Table XIV.

PRICES OF ARGENTINE CHILLED BEEF IN LONDON. HINDQUARTERS.

(Cents per pound.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	10.01	9.51	8.87	8.51	10.52	10.52	10.25	10.52	9.94	8.49	9.51	8.62	9.61
1910	9.00	9.38	9.32	9.76	11.15	10.84	8.87	10.52	9.69	9.63	7.85	8.47	9.54
1911	9.00	8.43	9.43	9.19	9.25	8.22	7.86	7.10	9.54	8.17	8.33	9.95	8.71
1912	10.27	10.35	10.09	10.34	11.47	9.97	9.90	10.53	10.13	9.87	9.03	10.48	10.20
1913	8.88	10.41	10.41	10.76	9.12	10.01	11.41	10.70	10.62	11.13	10.87	11.01	10.44
1914	10.76	10.75	10.70	10.09	11.95	11.32	12.53	14.52	15.10	13.82	13.47	14.26	12.44
1915	15.07	15.44	13.76	15.36	16.91	17.80	17.31	18.14	15.15	16.23	15.02	15.35	15.96
1916	17.32	15.80	16.73	18.98	21.81	20.82	18.82	20.22	18.83	18.58	17.41	20.65	18.83
1917	21.31	23.90	23.77	22.30	24.08	27.29	26.50	28.07	23.77	23.27	22.77	22.77	24.15
1918	22.77	22.77	26.42	27.49	27.49	27.48	27.48	27.50	27.99	31.45	*	31.47	27.30
1919	31.47	31.47	28.09	27.37	24.43	24.26	22.47	21.14	20.68	22.61	22.96	21.20	24.85
1920	20.64	16.53	18.07	19.06	19.25	19.74	19.26	18.10	17.56	17.36	17.36	17.46	18.37
1921	18.78	19.36	19.89	19.24	17.19	15.87	16.46	17.21	15.32	12.91	14.22	15.46	16.83
1922	12.65	11.02	11.49	14.94	13.89	13.81	12.97	13.84	14.77	12.80	12.64	14.21	13.25

* No quotations.

Source - British Ministry of Agriculture and Fisheries, Return of Market Prices

[] Price Control, Jan. 1917 - March 1921. During price control the quotation is usually for frozen beef. When separate quotations were made for chilled beef the price was the same as for frozen beef.

Table XV.

PRICES OF ARGENTINE CHILLED BEEF IN LONDON. FOREQUARTERS

(Cents per pound)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1913	7.48	7.55	7.55	7.75	6.72	6.72	6.90	6.46	6.77	7.14	7.96	8.29
1914	8.61	8.54	8.04	7.47	7.57	7.32	7.50	10.80	12.34	11.67	11.81	11.98
1915	12.10	12.83	12.31	13.30	13.98	14.98	14.39	14.46	11.73	12.43	11.68	11.61
1916	12.87	12.95	13.84	15.48	17.65	18.09	15.18	14.32	14.87	15.17	18.92	16.32
1917	11.84	20.80	21.23	19.82	21.00	21.30	20.68	21.77	19.32	19.20	18.81	18.81
1918	18.81	18.81	21.23	21.05	21.05	21.04	21.04	21.06	21.55	25.01	*	25.03
1919	25.03	25.03	21.73	21.08	18.13	17.06	14.63	13.57	13.28	16.74	17.86	16.49
1920	16.06	12.31	13.36	13.55	12.83	13.16	12.84	12.07	11.71	11.58	11.42	11.64
1921	12.52	12.90	13.05]	11.29	8.29	7.86	7.76	8.22	8.15	8.07	9.01	8.36
1922	6.82	6.70	7.52	8.62	7.87	6.96	6.60	7.09	7.01	6.82	7.70	8.45

* No quotations

[] Price Control, Jan. 1917 - Mar. 1921. See also note to Table XIII.

Source - British Ministry of Agriculture and Fisheries, Return of Market Prices.

Table XVI.
INDEX OF PRICES OF CHILLED BEEF. HINDQUARTERS. LONDON.

(Converted to cents per pound)

Base 1909-13 average. 9.699.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	103	98	91	88	108	108	106	108	102	88	98	89	99
1910	93	97	96	101	115	112	91	108	100	99	81	87	98
1911	93	87	97	95	95	85	81	73	98	84	86	103	90
1912	106	107	104	107	118	103	102	109	104	102	93	108	105
1913	92	107	107	111	94	103	118	110	109	115	112	114	108
1914	111	111	110	104	123	117	129	150	156	142	139	147	128
1915	155	159	142	158	174	184	178	187	156	167	155	158	164
1916	178	163	172	196	225	215	194	208	194	192	180	213	194
1917	220	246	245	230	248	281	273	289	245	240	235	235	249
1918	235	235	272	283	283	283	283	284	289	324	*	324	281
1919	324	324	290	282	252	250	232	218	213	233	237	219	256
1920	213	170	186	197	198	204	199	187	181	179	179	180	189
1921	194	200	205	198	177	164	170	177	158	133	147	159	174
1922	130	114	118	154	143	142	134	143	152	132	130	146	136

* No quotations.

high freight rates.

No rates of ocean freight are quoted on chilled and frozen beef from Buenos Aires to New York, but the rate on canned beef in December, 1922, averaged \$2.90 per hundred pounds as compared with an average for the year of \$2.57. This is at least double the prewar rate although it represents a decided drop from the years of the war. As recently as 1920 the berth rate on canned meat from Argentine ports to New York averaged \$6.66 per hundred pounds.

The British Market for Argentine Beef.

Tables XIV and XV show the course of prices of Argentine chilled beef in the Smithfield Market in London,¹ and in Table XVI the prices of hindquarters are reduced to an index number based on the average prices for the five year period 1909-1913. In comparing this index with the index of cattle prices in Buenos Aires (Table VIII, a number of very significant differences appear. In the first place it may be observed that while the Buenos Aires cattle market is largely dependent on the British market for beef, the British market is influenced by a great variety of factors. For, while in 1921, 83 per cent of the total exports of chilled and frozen beef from Argentina went to the United Kingdom, only 27 per cent of the British beef supply came from the Argentine.

Beginning with the year 1909, London beef prices were fairly constant for two years. In 1911 the market was relatively weak, but decidedly

¹ Converted to cents per pound on the basis of the par of sterling exchange 4.8665, to 1912. From Jan. 1912 to June, 1921, on the basis of the average monthly rate of sterling exchange quoted in the International Yearbook of Agricultural Statistics, pages 504 and 498. From July, 1921, to date on the basis of the average monthly rate of sterling exchange quoted in the Bulletin of the U.S. Federal Reserve Board.

stronger in 1912 and 1913 as imports from the United States declined. In 1914 prices increased sharply as early as May with a further increase with the outbreak of the war. Throughout the whole period of the war prices continued to rise in spite of the price control which went into effect in January, 1917. The highest price, two and a quarter times the prewar average, was that fixed by the food control in October, 1918, one month before the Armistice. This price stood until March, 1919. From this date the fixed prices were successively lower with two minor exceptions until March 29, 1921, when control ceased. Immediately after decontrol prices rose slightly and then began to decline until in February, 1922, the index stood at 114 or lower than in any month since April, 1914. Later in the year, however, prices were again higher, and the average index number for the year 1922 was even higher than the average for 1914. From the point of view of the British consumer, the situation was still worse for, in British currency, the average price of Argentine chilled beef hindquarters was 67 shillings in 1922, as compared with a prewar average of 44/9 and a 1914 average of 51 shillings.

Tables XVII and XVIII show the prices and the index number of prices of good Western dressed carcass beef in the New York market. A comparison of these prices with the prices of Argentine chilled hindquarters in London in Tables XIV and XVI shows a relatively close correlation. Only during the war years from the beginning of 1915 to the middle of 1919, do the prices show any marked divergence aside from normal market fluctuation. During these war years the prices of Argentine chilled hindquarters and even in 1916, 1917 and 1918, the prices of Argentine chilled forequarters were consistently higher than good Western dressed beef in New York. In

other years the New York prices have averaged higher. However, if we can assume that Argentine chilled beef would bring no higher price in New York than the grade of American beef under consideration, there would not appear to be any advantage in the New York market over the London market, when the three cent tariff is taken into consideration.

Profits of the Packing Companies

It is evident, therefore, that the British consumer is not receiving the full benefit of the low prices of cattle in Argentina.

In Table XIX, the yearly index numbers of Argentine cattle and the index number of Argentine beef in London are shown side by side together with an index number of the valuations of Argentine export beef in Buenos Aires as reported to the Argentine Government.¹

Table XIX
Index Numbers of Cattle and Beef Prices.

Year :	: Prices of Chilled Beef Steers, Buenos Aires	: Prices of Argentine chilled beef hind- quarters, London.	: Valuation of frozen and chilled beef ex- ports, Buenos Aires.
1909 :	87	99	100
1910 :	95	98	100
1911 :	98	90	100
1912 :	97	105	100
1913 :	124	103	100
1914 :	143	128	101
1915 :	156	155	210
1916 :	171	194	227
1917 :	158	249	226
1918 :	171	231	302
1919 :	206	256	273
1920 :	186	189	244
1921 :	122	174	
1922 :	98	136	

¹ Anuario de la Direccion General de Estadistica, 1909-1917. El Comercio Exterior Argentine, Bulletin 130, 134, and 137 (for 1913, 1919 and 1920). Obtained by dividing quantity of exports into valuation and reducing to an index.

Table XVII.

WHOLESALE PRICE OF GOOD WESTERN DRESSED BEEF IN NEW YORK, 1909 - 1922.

Cents per pound. Carcass beef.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	9.68	9.56	9.56	9.44	9.78	9.75	9.58	9.62	9.94	10.25	10.12	10.00	9.77
1910	9.45	8.97	10.81	11.50	11.00	11.38	11.10	11.38	11.50	10.90	9.75	9.25	10.58
1911	9.34	9.53	9.12	9.35	9.12	9.25	9.30	9.88	10.20	10.56	10.75	10.15	9.71
1912	10.12	10.00	10.00	10.56	11.62	12.20	12.50	12.65	12.75	12.75	12.65	12.31	11.68
1913	11.88	11.50	12.15	12.94	12.40	12.62	12.75	12.75	13.00	12.94	12.75	12.75	12.54
1914	12.62	12.69	12.75	12.44	12.75	12.81	13.56	14.55	14.31	14.50	14.25	13.50	13.39
1915	12.50	11.12	11.38	11.38	11.90	12.00	13.45	14.00	14.50	14.00	13.50	12.38	12.68
1916	12.00	11.10	12.25	13.25	14.42	15.19	14.88	14.60	14.94	14.75	13.75	13.81	13.74
1917	13.65	14.62	14.84	15.94	16.24	16.59	17.43	18.90	20.35	19.33	18.89	18.58	17.11
1918	17.90	17.55	17.89	21.41	23.58	25.39	24.20	25.21	26.53	25.04	25.91	23.88	22.87
1919	25.13	25.16	24.81	24.43	23.26	18.83	20.96	22.05	21.28	23.58	23.60	20.61	22.81
1920	21.28	18.58	19.64	21.94	19.00	24.82	24.94	23.78	23.66	22.00	21.08	18.20	21.58
1921	17.36	14.45	17.08	17.04	15.64	15.56	15.25	15.85	15.34	15.05	14.34	14.92	15.66
1922	14.06	13.12	13.62	13.60	14.34	14.08	16.31	16.00	17.19	16.75	16.06	15.63	15.06

Source - From 1909 through Feb. 1917. - National Provisioner, New York Market Price Western Dressed Meats, Native Steers, Common to Fair. From March 1917 to date. Live Stock, Meats and Wool Division, Bureau of Agricultural Economics, U.S. Dept. of Agriculture.

Table XVIII.
INDEX NUMBER OF WHOLESALE PRICE OF GOOD WESTERN DRESSED CARCASS BEEF
NEW YORK, 1909 - 1922.

Base Average Price 1909-1913. = 10.856 cents per pound.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1909	89	88	88	87	90	90	88	89	92	94	93	92	90
1910	87	83	100	106	101	105	102	105	106	100	90	85	97
1911	86	88	84	86	84	85	86	91	94	97	99	93	89
1912	93	92	92	97	107	112	115	117	117	117	117	113	107
1913	109	106	112	119	114	116	117	117	120	119	117	117	115
1914	116	117	117	115	117	118	125	134	132	134	131	124	123
1915	115	102	105	105	110	111	124	129	134	129	124	114	117
1916	111	102	113	122	133	140	137	134	138	136	127	127	127
1917	126	135	137	147	150	153	161	174	187	178	174	171	158
1918	165	162	165	197	217	234	223	232	244	231	239	220	211
1919	231	232	229	225	214	173	193	203	196	217	217	190	210
1920	196	171	181	202	175	229	230	219	218	203	194	168	199
1921	160	133	157	157	144	143	140	146	141	139	132	137	144
1922	130	121	125	125	132	130	150	147	158	154	148	144	139

It would thus appear that while the Argentine rancher was receiving about double the prewar price for his cattle, export beef was valued at from three to four times the pre-war average price. Unfortunately we are unable to analyze packing and marketing costs, but these were undoubtedly higher during the war, than before. Even as regards ocean freights we have no information, but in that respect the freight payment is frequently only a book transaction as many of the refrigerator steamers are owned by the packing companies, or operated under long term contracts.¹

The packers, however, have made official reports to the Argentine government showing large profits for the war period. Furthermore, in July, 1921, the Ministry of Agriculture asked the packers for statements on the crisis in the cattle market.² To this request the packers all replied in some detail. The representative of the Anglo-South American Meat Company (Vestey Bros.) wrote - "It is true that during the..... [war period] the frigorificos have made large profits..... On the other hand the frigorificos have found it necessary to construct buildings which at that time were very costly and today are lying idle."

Frigorifico "La Blanca" (Morris and Armour) says - "The profits of the frigorifico business were large during the period of the war, as were also the profits of any other branch of industry which supplied the needs of the belligerent nations."

Swift and Company reports - "The balance of 9,502,970.43 gold, which appears on our profit and loss account for Dec. 31, 1920, represents

¹ Critchell and Raymond, op. cit., P: 144.

² Report of Francis White, Charge d'Affaires of the United States in Buenos Aires, dated Feb. 2, 1922.

undivided profits made by the companies for the years 1911-1920, inclusive, and especially during the years 1916 to 1918, the years of the war, when the gains of all industries and companies, especially those which handled food products.....were higher than normal."

The Sansinena Company says: "It is just to recognize that during the war.....[the packers] have had good years, but what merchant or industrial did not make good profits during that period?.....These favorable business conditions terminated with the war. [Prices] then commenced to fall.....bringing the usual trouble to all who could not liquidate their stocks of merchandise with some speed. A proof is that the Smithfield and Argentine Meat Company closed their last balance with a loss of £ 125,000 and it would not be strange if more than one company closed its 1921 balance with considerable loss."

Cost of Production of Beef Cattle in Argentina.

In the foregoing discussion of cattle prices it has been evident that the profits of the cattle raiser must be lower even than in pre-war years. The possibility still remains, however, that the pre-war profits may have been excessive and that the lower prices and higher cost of the present may still leave a reasonable margin of profit for the rancher.

The cost of production of beef cattle is probably much lower in Argentina than in the United States, but we have very little information as to the actual cost. The only estimate which is available is one recently made by the Rural Society of Argentina for the National Live Stock Bureau. (1) The figures are given for a ranch of 6,173 acres (2,500 hectares) with a land value of \$50.75 per acre (350 pesos per hectare). The

(1) Consular Report, Rosario, Argentina, December 19, 1922.

following table is based upon the figures in the original estimate:

Table XX.

Estimated Cost of Cattle Production in Argentina (Conversions made at .35993 the Average Exchange Rate in 1922.)

Ranch Cost.

Ensilage	\$ 1,263
Wages, foreman and four laborers	1,297
Maintenance of men (groceries)	778
Taxes	1,139
Miscellaneous	127
Depreciation of breeding herd (re- placing 10 bulls)	1,441

Total Ranch Cost \$ 6,095

Charges against Profits.

Rental of Land, or interest on investment in land at 3 per cent	\$25,083
Interest on investment in animals at 3 per cent	4,570
Interest on investment in horses and equip- ment	173

Total Charges Against Profits... \$29,826

Weight of animals sold -

325 head at 1200 pounds ---	390,000 pounds.
325 head at 1300 pounds ---	422,500 pounds.

Total Weight of Animals sold 812,500 pounds.

Ranch Cost per hundred pounds cattle sold ---	\$ 0.75
Charges against Profits per hundred pounds cattle sold	3.67

Total Cost per hundred pounds
cattle sold \$ 4.42

The obvious criticism of this computation is that the land value is higher than would be justified by the value of the product under normal conditions. Since, as we have seen, the average prices of cattle in 1922 were only slightly lower than the average for 1909-1913 and actually

higher than the average for 1909-1912, the prospect of earning eight per cent interest on a valuation of \$51 per acre under peace time conditions would appear to be hopeless. If, as Consul Bonney suggests, the land value were taken at \$25.50 per acre, with the value of cattle and equipment and expense items remaining the same, the interest on the land in Table XX would be reduced to \$12,603 and the total charges against profits to \$17,346. The total cost per hundred pounds of cattle sold would then be only \$2.83 instead of \$4.42.

It is apparent that the costs in Table XX are based on the assumed use of alfalfa pasture land during the whole process of producing a beef steer. But as a matter of fact, we are told that it is quite usual to breed cattle on the cheaper ranges in the more arid regions, and to use the alfalfa pastures only for finishing. In the United States such semi-arid pasture land in the western part of the Great Plains is valued at less than \$5. per acre, with about 20 acres required for each animal over one year old. This means a land value of less than \$100 for each animal. In the illustration in Table XX, 2,340 cattle are pastured on 6,173 acres valued at \$51 per acre or \$135 for each animal. Since so large a proportion of the land area of Argentina is semi-arid it would seem that where the practice of breeding on the range and finishing on alfalfa is followed, the cost of production would be materially lower than in the estimate quoted above.

In order to make a rough comparison between the cost of production in Argentina and that in the United States we may consider the actual costs in 1922 on a Colorado cattle ranch of 6000 acres. (1)

(1) Data furnished by Mr. R. H. Wilcox, in Charge of Cost of Production Studies Division of Farm Organization and Cost of Production, Bureau of Agricultural Economics, United States Department of Agriculture.

Table XXI.

Cost of Production of Cattle on a Ranch in Colorado, 1922.

Ranch Cost.

Hay	\$4,522.00
Salt	60.68
Labor	2,388.48
Groceries	934.91
Taxes	772.50
Veterinary	69.35
Repairs and hardware	1,407.96
Miscellaneous	464.96
Death and accident loss, breeding herd	286.95
Depreciation, breeding herd	667.31
Depreciation, improvements	510.66
Depreciation, equipment and horses	913.74
Total Ranch Cost	<u>\$12,999.50</u>

Charges Against Profits.

Rental of land, or interest in investment in land at 6 per cent	\$ 2,272.64
Interest on investment in breeding herd at 7 per cent	622.75
Interest on investment in improvements at 7 per cent	1,451.73
Interest on investment in horses and equip- ment at 7 per cent	298.41
Total Charges Against Profits	<u>\$ 4,645.53</u>

Total weight of animals sold - 371 head - 364,710 pounds.

Ranch cost per hundred pounds cattle sold	\$ 3.56
Charges against profits per hundred pounds cattle sold	<u>1.27</u>
Total cost per hundred pounds cattle sold	\$ 4.83

The relation between costs in Argentina and the United States may be better appreciated from the figures in the following table showing the financial statements of the two ranches in question.

Table XXII.
Comparative Financial Statement, 1922.

Argentina Ranch.		Colorado Ranch.	
Capital Account.		Capital Account.	
Land	\$ 313,538	Land	\$21,800
1000 Cattle	23,832	Improvements	20,739
650 Heifers	7,030	243 Breeding Stock	8,895
650 2 year olds	14,060	100 2 year old Heifers	3,500
40 Bulls	7,208	100 Yearling Heifers	2,500
20 Horses, saddle	432	100 Yearling Steers	2,800
20 Horses, draught	647	100 2 year old Steers	4,000
Vehicles, seeders, tools		198, 3 year old Steers	12,500
etc.	1,031	Equipment and horses	26,337
Total Capital ...	\$ 372,828	Total Capital	\$103,071
Sales	\$ 26,240	Sales	\$ 12,767.65
Ranch Cost	6,095	Ranch Cost	12,999.50
Balance	\$ 20,145	Balance (loss)	231.85
Interest earned on Capital - 5.4		Interest earned on Capital - 0.	
per cent.			

These figures must be used with caution as there is no assurance that either the Argentine Statement or the Colorado Statement are thoroughly typical. The Argentine statement in its original form, however, was so presented as to show a loss of over \$14,000, on the operation of the ranch in 1922. This was done by including the charges against profits with the ranch costs, and crediting sales at near the low price for the year, instead of at the average price as in the table above. It seems justifiable, therefore, to assume that the ranch cost in Argentina is exceedingly low, and that the chief loss of the cattle producers consists in their inability, under present price conditions, to earn the usual rate of interest on high land values.

Cattle Resources of Argentina.

There have been three censuses of live stock in Argentina, in 1895, 1908, and in 1914. A fourth census is now being taken as of December 31, 1922. The results of the former censuses with the official estimate for 1919 are as follows:

1895	.....	21,701,526
1908	.....	29,116,625
1914	.....	25,866,763
1919	est. .	27,720,832

There is a very wide difference of opinion as to the number of cattle at present in Argentina. Even the estimates made by the Federal Government differ widely from those made by the provincial governments. For example the Federal Government in 1919 estimated the number of cattle in the Province of Buenos Aires as 9,755,372, while the provincial census of 1920 shows 14,331,138. In Entre Rios the discrepancies are almost as great. The Buenos Aires Herald for June 3, 1922, in commenting on the results of the provincial census, shows that it is hardly possible that the number of cattle should have increased so greatly with exportation at its height during the war. It prefers, therefore, to take the national government estimates, but feels strongly the necessity of a new national census such as is now in progress.

It may be noted, however, that the national census of 1914 was very largely discredited at first and it seems entirely possible that more rapid breeding may have more than made up for the increased slaughter in recent years. If the censuses in Buenos Aires province and in Entre Rios are more nearly correct than the national estimates for these provinces, it may mean that an accurate census of the whole nation would show as high as 35,000,000 cattle.

The quality of Argentine cattle has improved rapidly with the development of the trade in frozen and chilled beef. In the early days of the industry when the only beef exported was jerked beef, the cattle were almost exclusively of the small native "criollo" breed. These cattle have now been crossed with the finer imported strains and there are also large herds of purebred Shorthorns, Aberdeen Angus and Herefords in the Argentine alfalfa pastures.

The Argentine Packing Industry.

The business of meat packing in Argentina was spared the hardships incident to the experimental stages of a new undertaking. The market for frozen and chilled beef was already developed chiefly in the United Kingdom, finely bred cattle were available and in the construction of packing houses it was only necessary to copy the established lines of the American plants.

The packing houses, known in Argentina as frigorificos, are chiefly controlled by American and British capital. Only one of the eight principal companies, the Compañia Sansinena, is considered an Argentine firm. The American firms are Swift, Armour, Morris and Wilson, Swift and Company not only operate under their own name in Argentina, but control the Frigorifico Montevideo in Uruguay. Morris and Company control La Blanca Frigorifico jointly with Armour and Company and also control the Artigas plant in Uruguay. The British Companies are the Anglo-South American Meat Company, the British and Argentine Meat Company, and the Smithfield and Argentine Meat Company. The first two companies are controlled by the Vestey Brothers, who also control a large part of the meat

trade of Australia and New Zealand. The British and Argentine Meat Company during the war leased its largest plant, Las Palmas, to the British Government.

Competition among these eight firms seems to be practically eliminated by means of a regular conference in Buenos Aires at which the weekly shipments of the various companies are agreed upon in advance. The companies, however, deny that any price agreements have been made. In his official report of Sept. 23, 1922, as an Argentine Government Agricultural Commissioner, Sr. Nicholas A. Calvo, gives the current percentage agreement of exports of chilled beef as follows:

Table XXIII

Packer's Conference Agreement for Division of Chilled Beef Shipments.

Packing House.	Control.	Per cent of total shipment
Swift, La Plata	United States	17.44
Armour	" "	11.35
La Blanca, (Morris and Armour)	" "	8.65
Wilson	" "	5.41
Artigas, (Morris)	" "	5.26
Frigorifico Montevideo, (Swift)	" "	4.76
Total United States		52.87
Las Palmas, (Vestey)	British	8.10
Anglo-South American, (Vestey)	"	11.25
British and Argentine, (Vestey)	"	12.29
Smithfield and Argentine	"	4.61
Total British		36.25
Sansinena	Argentine	6.99
Frigorifico Uruguay (Sansinena)	"	3.39
Total Argentine		10.33
Total		100.00

Source: Argentine Meat in Europe; Report of the Official Commission, Review of the River Plate, Oct. 6, 1922, p. 335.

It will be noted from Table XVIII that more than half of the chilled beef exports from the River Plate are in the hands of the American interests. These figures tend to be confirmed by the actual exports by companies for the first nine months of 1922, as reported in the "Review of the River Plate," October 6, 1922, showing that in these months 53.9 per cent of all beef exported was shipped from American-owned packing houses.

Export Duties.

Since Jan. 19, 1918, the Argentine government has collected an export duty on cattle products amounting to 15 per cent of the difference between the appraised value and the basic value fixed in the law. For frozen and chilled beef the basic value is 223.30 gold pesos per 1000 kilos. or at 1922 average exchange, \$3.29 per 100 lbs. The basic valuations are fixed from month to month by a committee representing the Argentine government and various interested organizations. Until January, 1922, the valuation of chilled and frozen beef was above the basic figure, and a tax was paid, but since that date the valuation has remained constant at \$210 gold pesos per 1000 kilos. or \$7.79 per 100 lbs. and no tax has been levied.

APPENDIX I

Table XXIV - Exports of Frozen and Chilled Beef from Argentina,
1899-1922.

Table XXV - Exports of Frozen and Chilled Beef from Argentina,
1909-1919. Quantity and Value by countries of
destination.

Table XXVI - Exports of Jerked Beef, Canned Beef and Hides,
1899-1919.

Table XXIV

EXPORTS OF FROZEN AND CHILLED BEEF FROM ARGENTINA, 1899 - 1922
(Tons of 2000 lbs.)

Year	United Kingdom	United States	Other Countries and orders	Total
1899	10,008	.....	.....	10,008
1900	27,106	.....	.....	27,106
1901	47,946	.....	1,552	49,498
1902	59,967	.....	17,214	77,181
1903	66,816	.....	23,044	89,860
1904	89,849	.....	17,894	107,743
1905	140,778	.....	27,720	168,498
1906	150,469	.....	19,074	169,543
1907	144,858	.....	7,504	152,362
1908	195,683	.....	3,630	199,313
1909	230,959	.....	1,248	232,207
1910	277,952	.....	1,710	279,662
1911	331,787	.....	13,050	344,837
1912	361,918	.....	16,006	377,924
1913	391,385	3,581	8,729	403,695
1914	339,785	65,390	1,539	406,714
1915	329,724	44,162	25,960	399,846
1916	395,062	9,744	66,647	471,453
1917	312,612	1,536	121,081	435,229
1918	306,209	768	239,339	546,316
1919	323,188	2,018	116,520	441,726
1920	385,601	7,132	66,158	458,891
1921	c. 357,898	c. 2,830	c. 67,464	c. 428,192
)	a. 418,874	b. 526	.....	.....
1922	d. 396,609	d. 1,293	d. 49,843	d. 447,745
	a. 420,102	.....	.....	.....

- a. Imports from Argentina into United Kingdom. Accounts Relating to Trade and Navigation of the United Kingdom, Dec. 1922.
- b. Imports into the United States. Foreign Commerce and Navigation of the U. S. 1921. From the same source, Imports in Tons of 2000 lbs.; 1914, 29,793; 1915, 65,340; 1916, 26,340; 1917, 1,148; 1918, 1,311; 1919, 131.
- c. Total from "Review of the River Plate," Oct. 27, 1922, P. 1015. "From Official Sources." Distribution estimated from unofficial data.
- d. Jan. 1 - Dec. 31, 1922, 5,095,556 quarters. Review of the River Plate, Jan. 12, 1923, p. 75. The average weight of quarters exported in the years 1917-20 inclusive was 175.74 lbs. Therefore estimated weight exported Jan. 1 to Dec. 31, 1922, is 447,745 tons.

Source - Anuario de la Direccion General de Estadistica, 1899-1917.
Comercio Exterior Argentino, 1918, 1919.

Table XXV

EXPORTS OF FROZEN AND CHILLED BEEF FROM ARGENTINA

(Quantities in Tons of 2000 lbs.)

F R O Z E N						
Year :	United Kingdom :	United States :	Other Countries :	Total Exports :	Value Dollars :	
	Tons	Tons	Tons	Tons		
1909 :	229,695	.....	1,165	230,860	20,206,336	
1910 :	268,649	.....	1,709	270,358	23,663,343	
1911 :	315,213	.....	12,984	328,197	28,725,755	
1912 :	334,106	.....	16,006	350,112	30,695,071	
1913 :	354,172	3,122	8,729	366,023	31,967,732	
1914 :	302,430	57,892	1,539	361,861	31,996,575	
1915 :	318,948	42,038	25,960	386,946	70,981,846	
1916 :	377,257	9,744	66,647	453,648	90,101,274	
1917 :	270,069	1,536	120,640	392,245	77,159,392	
1918 :	304,306	768	239,339	544,613	144,061,025	
1919 :	320,454	2,018	116,520	438,992	143,590,031	
1920 :	329,902	7,132	65,992	403,026	86,224,373	
	.....	.....	.....	b 401,808	.....
1921 : a	266,250	.....	.....	b 252,258	.....
1922 : a	135,000	.....	.....	b 148,426	.....

C H I L L E D							
Year :	United Kingdom :	United States :	Other Countries :	Total Exports :	Value Dollars :	Frozen & Chilled Quantity Tons :	Frozen & Chilled Value Dollars :
	Tons	Tons	Tons	Tons	Dollars	Tons	Dollars
1909 :	1,264	.....	83	1,347	117,897	232,207	20,324,233
1910 :	9,303	.....	1	9,304	814,420	279,662	24,477,763
1911 :	16,574	.....	66	16,640	1,450,466	344,837	30,182,221
1912 :	27,812	.....	...	27,812	2,438,369	377,924	33,133,440
1913 :	37,213	459	...	37,672	3,290,122	403,695	35,257,854
1914 :	37,355	7,498	...	44,853	3,965,926	406,714	35,962,501
1915 :	10,776	2,124	...	12,900	2,360,397	399,846	73,348,243
1916 :	17,805	.....	.....	17,805	3,530,420	471,453	93,637,700
1917 :	42,543	.....	441	42,984	3,922,360	435,229	86,081,758
1918 :	1,703	.....	...	1,703	375,998	546,316	144,437,023
1919 :	2,734	.....	...	2,734	842,119	441,726	144,432,150
1920 :	55,699	.....	166	55,865	11,952,106	458,891	98,176,479
1921 : a	52,624	.....	...	b 177,000	.....	b 429,358	.....
1922 : a	291,102	.....	...	b 295,496	.....	b 443,922	.....

a. Imports into United Kingdom from Argentina from Accounts Relating to Trade and Navigation of the United Kingdom.

b. Exports from Argentina. W. Weddel and Co. Review of the Frozen Meat Trade, 1922. p. 20.

Source: Anuario de la Direccion General de Estadistica, 1909-1917.
Comercio Exterior Argentino, 1918-1919.

Table XXVI.

EXPORTS OF JERKED BEEF, CANNED BEEF, AND OX
HIDES FROM ARGENTINA FROM 1899 THROUGH 1920.

(Tons of 2000 lbs.)

Year.	Jerked Beef.	Canned Beef.	Ox Hides Dry and Salted
1899	21,124	2,002	57,853
1900	18,132	1,549	56,536
1901	26,781	1,043	60,412
1902	24,586	1,812	68,233
1903	14,320	4,125	57,332
1904	12,926	2,677	57,637
1905	27,875	2,743	71,848
1906	5,126	1,388	61,813
1907	11,738	1,758	59,936
1908	7,330	1,904	71,116
1909	12,811	7,044	98,193
1910	10,408	13,318	100,169
1911	13,360	16,990	116,415
1912	9,727	19,510	121,497
1913	4,310	13,860	95,871
1914	2,620	14,426	86,051
1915	235	35,212	^b 99,016
1916	1,233	49,128	109,558
1917	^a 8,392	111,094	105,255
1918	^a 3,064	210,539	107,891
1919	^a 8,801	136,989	111,923
1920	^a 2,788	15,484	70,011

^a Salt meat, including pork and jerked beef.

^b Exports of tanned hides in 1915, units 129,079. Exports of tanned hides in other years relatively unimportant.

Source: Anuario de la Direccion General de Estadistica, 1899-1917. Comercio Exterior Argentino, 1918,-1920.

APPENDIX II.

PACKER'S PRODUCTION AND MARKETING COSTS.

The Buenos Aires Herald of February 11, 1923, published a translation of a communication addressed by the packing companies to the chairman of the committee on live stock matters of the National Chamber of Deputies, on the cost of production in the frigorificos. In this report the average price paid for export type steers in 1922 is given as 0.184 paper pesos per pound of anticipated dressed weight. On the assumption that these steers will dress 53 per cent of the live weight this is equivalent, at the average rate of exchange for 1922, to \$3.84 per hundred pounds live weight. The average given in Table VII is \$3.94 per hundred pounds live weight for chilled beef steers, which are usually of better quality than the average of all export steers.

In this communication a statement is made of the packers' costs for 1922, which is given here in terms of United States currency at the average exchange rate for 1922.

Table XXVII.

Packers' Cost of Production and Marketing-1922.

Cost of the animal, 1207 lbs. at \$3.84 per 100 lbs.....	\$46.35
Cost of slaughtering and dressing	10.08
Expenses of Transportation and Sales	<u>19.89</u>
Net Cost of the meat	\$76.32
Sale in England allowing 1% shrinkage.	
693 pounds classified as:	
64% chilled-444 lbs. at \$.0937 per lb.....	\$41.60
36% frozen-249 lbs. at .0845 per lb.....	<u>21.04</u>
Total proceeds of meat sales	62.64
Sales of by-products	<u>16.34</u>
Total Sales	<u>78.98</u>
Net profit per steer in 1922	\$ 2.66

It may be noted, however, that an unweighted average price for 1922 of chilled Argentine hindquarters as shown in Table 14 was 13.24 cents per pound and for forequarters 8.45 cents per pound. These figures from the British Ministry of Agriculture "Return of Market Prices" would indicate a carcass beef price considerably above the 9.37 cents per pound in the illustration above.

In a second note to the same committee, the representative of the packers makes the following significant statements:

"It can perhaps be maintained that Argentine chilled beef is the highest quality of meat imported into the British market, but it must also be admitted that the domestic meat of that country, from animals bred in stables and fattened on grain, is far superior to ours. The consumer of domestic meat is not and is not likely to become a consumer of ours, owing to this difference in quality; and this in spite of an appreciable difference in price, Argentine chilled beef often fetching in London only half the price of domestic beef.

"Argentine chilled beef replaces or is classed on a par with second quality meat of British origin, which is consumed by people in moderate circumstances and in modest restaurants, while frozen meat is what is generally sold in the country districts and in the big labor centers."

The writer then goes on to show that an increase in the price of Argentine beef in England would result in a material reduction in demand, and the substitution of other articles of food.